

REMARKS

Claims 18-38 are pending in the application, of which, Claims 18, 26, and 31 are independent. All claims have been rejected under 35 U.S.C. 103(a). Those rejections are respectfully traversed and reconsideration is requested.

Exemplary Claims

The following independent claims are reproduced for the convenience of the examiner. No amendments are being made.

18. (Previously presented) A method of monitoring a virtual path in a ring configuration comprising:
 - originating at least one of operations, administrative and maintenance calls at a source network element on the virtual path; and
 - monitoring for the at least one of operations, administrative and maintenance calls at the source network element on the virtual path.
26. (Previously presented) A method of monitoring a virtual path in a ring configuration comprising:
 - originating at least one of operations, administrative and maintenance calls at an intermediate network element on the virtual path; and
 - monitoring for the at least one of operations, administrative and maintenance calls at the source network element on the virtual path.
31. (Previously presented) A method of arranging a virtual path in a ring configuration comprising:
 - arranging a virtual circuit to permit transmission of at least one of operations, administrative and maintenance calls from a source network element to the source network element; and

arranging the source network element to monitor for the at least one of operations, administrative and maintenance calls.

Rejections Under 35 U.S.C. 103(a)

Claims 18, 19, 21-26, 28-32, and 34-38 have been rejected under 35 U.S.C. 103(a) as being unpatentable over Huey *et al.* (U.S. Patent No. 5,467,349, hereinafter “Huey”).

Claims 20, 27, and 33 have been rejected under 35 U.S.C. 103(a) as being unpatentable over Huey in view of Cappellari *et al.* (U.S. Patent No. 5,557,611, hereinafter “Cappellari”).

Before discussing the cited references, a brief review of the Applicants’ disclosure may be helpful without limiting the claims. The claimed embodiments of the Applicants’ disclosure are directed to a method for monitoring a virtual path in a ring configuration (i.e., the virtual path forms a ring). The term “ring configuration” does not refer to a ring network; however, the claimed embodiments may be implemented in a ring network. Fig. 3 of the Applicants’ disclosure illustrates an example embodiment with a virtual path that is configured to form a ring. In Fig. 3, a distributed virtual path 302 starts and ends at the same network element 304, forming a complete ring. The virtual path ring configuration allows a network element, such as network element 304, to receive transmissions not only from other network elements, but from itself as well. Therefore, network element 304 may send Operation, Administrative, and Maintenance (OAM) calls to itself. As a result of sending an OAM message to itself, network element 304 can monitor the same OAM message that it originated. (See Applicants’ specification, page 20, line 8 – page 21, line 4, and Fig. 3.)

Turning to the primary cited reference, Huey discloses in Fig. 7 an ATM switching network having three ATM switches. The cited portion of Huey illustrates how a single virtual circuit (VC) is used to carry multiple virtual circuit connections (VCCs) between customer premises sites using an add/drop virtual path connection (VPC). With reference to Fig. 7, the Office asserts that ATM switch 176, which is on a virtual path 178, originates an OAM call. The Office further asserts that the same ATM switch 176 monitors for the same OAM call that it originated; however, this is not possible, as the OAM call sent from ATM switch 176 will not be received by ATM switch 176. According to the ATM network illustrated in Fig. 7, the OAM

call can only be received at ATM switch 172. Therefore, the method of Huey does not originate an OAM call at a given ATM switch and monitor that same OAM call at the same ATM switch.

The Office further states that while Huey “does not disclose the method being applied in a ring network,” Huey discloses the existence of a ring network in Fig. 1, and that it would be “desirable to apply the method disclosed by Huey” in such a ring network. Applicants respectfully submit that this is irrelevant, however, because Applicants do not claim a ring network. Independent Claims 18, 26, and 31 recite a “*virtual path in a ring configuration*,” that is, a virtual path configured to form a ring. The claimed virtual path is not necessarily in a ring network.

Even if the method disclosed by Huey were applied to a ring network, as asserted by the Office, the resulting network would still not function in the same way as the claimed invention. Referring to Fig. 7 of Huey, if assumed that ATM switches 172, 174, and 176 were connected in a ring pattern, such as in Fig. 1 of Huey, the virtual path 178 would start at one ATM switch (for example ATM switch 176) and end at a different ATM switch (for example, ATM switch 172). Thus, the virtual path 178 of Huey would not be “*a virtual path in a ring configuration*,” as claimed in independent Claims 18, 26, and 31.

Moreover, even if the presence of Huey’s virtual path 178 in a ring network were to be construed as to read on “*a virtual path in a ring configuration*,” the implementation of the method of Huey in a ring network would still not originate an OAM call at a given ATM switch and monitor that same OAM call at the same ATM switch, because, as described above, Huey’s virtual path 178 in such a ring network would not start at one ATM switch and end at the same ATM switch.

Therefore, whether implemented in a ring network or not, Huey does not teach or suggest “*a virtual path in a ring configuration*,” “*originating at least one of operations, administrative and maintenance calls at a source network element on the virtual path*,” and “*monitoring for the at least one of operations, administrative and maintenance calls at the source network element on the virtual path*,” as claimed in independent Claim 18. Thus, Claim 18 is believed to be novel and non-obvious over the cited art.

Similarly, the method of Huey does not originate an OAM call at an intermediate ATM switch and monitor that same OAM call at a source ATM switch. Referring to Fig. 7 of Huey, if

ATM switch 176 were considered a source switch, ATM switch 172 were considered a destination switch, and ATM switch 174 were considered an intermediate switch, the origination of an OAM call at the intermediate ATM switch 174 would not reach the source ATM switch 176 and, thus, would not be monitored by the source ATM switch 176.

Therefore, whether implemented in a ring network or not, Huey does not teach or suggest *“a virtual path in a ring configuration,” “originating at least one of operations, administrative and maintenance calls at an intermediate network element on the virtual path,” and “monitoring for the at least one of operations, administrative and maintenance calls at a source network element on the virtual path,”* as claimed in independent Claim 26. Thus, Claim 26 is believed to be novel and non-obvious over the cited art.

Similarly, the method of Huey does not permit the transmission of an OAM call from a given ATM switch to that same ATM switch. Therefore, whether implemented in a ring network or not, Huey does not teach or suggest *“a virtual path in a ring configuration,” “arranging a virtual circuit to permit transmission of at least one of operations, administrative and maintenance calls from a source network element to the source network element”* and *“arranging the source network element to monitor for the at least one of operations, administrative and maintenance calls,”* as claimed in independent Claim 31. Thus, Claim 31 is believed to be novel and non-obvious over the cited art.

Dependent Claims 19-25, 27-30, and 32-38 depend from independent Claims 18, 26 or 31 and, thus, necessarily include the elements of Claims 18, 26 or 31 shown above to be novel and non-obvious over the cited art. Therefore, Applicants respectfully submit that dependent Claims 19-25, 27-30, and 32-38 are novel and non-obvious over the cited art for at least the same reasons as presented above for independent Claims 18, 26, and 31. Applicants further submit that cited reference Cappellari does not add to Huey a virtual path that is configured in a ring.

As such, the rejections of Claims 18-38 under 35 U.S.C. 103(a) are believed to be overcome. Withdrawal of those rejections is respectfully requested. Accordingly, the present invention as claimed is not believed to be anticipated or made obvious by the cited or prior art. Acceptance of Claims 18-38 is respectfully requested.

CONCLUSION

In view of the above remarks, it is believed that all now pending claims (Claims 18-38) are in condition for allowance, and it is respectfully requested that the application be passed to issue. If the Examiner feels that a telephone conference would expedite prosecution of this case, the Examiner is invited to call the undersigned.

Respectfully submitted,

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